



Hex Nuts

Stress Under Proof Load

HEX NUTS - STRESS UNDER PROOF LOAD (MPa or N/mm²)

Nominal Size	Pitch mm	Stress Area mm ²	Class 5	Class 8	Class 10	Class 12**	AS1252	Mild Steel Hex Coupler	Sampson***
M3	0.50	5.03	520	800	1040	1140	-	520	-
M4	0.70	8.78	520	800	1040	1140	-	520	-
M5	0.80	14.20	580	855	1040	1140	-	580	-
M6	1.00	20.10	580	870	1040	1140	-	580	-
M8	1.25	36.60	590	870	1040	1140	-	590	1205
M10	1.50	58.00	590	870	1050	1140	-	590	1205
M12	1.75	84.30	610	880	1050	1170	1075	610	1205
M14	2.00	115.00	610	880	1050	1170	-	610	1205
M16	2.00	157.00	610	880	1050	1170	1075	610	1205
M18	2.50	192.00	630	920	1060	1170	-	630	1205
M20	2.50	245.00	630	920	1060	1170	1075	630	1205
M22	2.50	303.00	630	920	1060	1170	1075	630	1205
M24	3.00	353.00	630	920	1060	1170	1075	630	1205
M27	3.00	459.00	630	920	1060	1170	1075	630	1205
M30	3.50	561.00	630	920	1060	1170	1075	630	1205
M33	3.50	694.00	630	920	1060	1170	1075	630	1205
M36	4.00	817.00	630	920	1060	1170	1075	630	1205
M39	4.00	976.00	630	920	1060	1170	-	630	1205
M42*	4.50	1121.00	630	920	1060	1170	-	630	1205
M48*	5.00	1473.00	630	920	1060	1170	-	630	1205
M52*	5.00	1758.00	630	920	1060	1170	-	630	1205
M64*	6.00	2676.00	630	920	1060	1170	-	630	1205

* Extrapolated. ** Extrapolated for >M16. *** Extrapolated >M36

Hex Nuts

Minimum Proof Load



HEX NUTS - MINIMUM PROOF LOAD (KN)

Nominal Size	Pitch mm	Stress Area mm ²	Class 5	Class 8	Class 10	Class 12"	AS1252	Mild Steel Hex Coupler	Sampson**
M3	0.50	5.03	2.62	4.02	5.23	5.73	-	2.62	-
M4	0.70	8.78	4.57	7.02	9.13	10.01	-	4.57	-
M5	0.80	14.20	8.24	12.14	14.77	16.19	-	8.24	-
M6	1.00	20.10	11.66	17.49	20.90	22.91	-	11.66	-
M8	1.25	36.60	21.59	31.84	38.06	41.72	-	21.59	44.10
M10	1.50	58.00	34.22	50.46	60.90	66.12	-	34.22	69.89
M12	1.75	84.30	51.42	74.18	88.52	98.63	90.62	51.42	101.58
M14	2.00	115.00	70.15	101.20	120.75	134.55	-	70.15	138.58
M16	2.00	157.00	95.77	138.16	164.85	183.69	168.78	95.77	189.19
M18	2.50	192.00	120.96	176.64	203.52	224.64	-	120.96	231.36
M20	2.50	245.00	154.35	225.40	259.70	286.65	263.38	154.35	295.23
M22	2.50	303.00	190.89	278.76	321.18	354.51	325.73	190.89	365.12
M24	3.00	353.00	222.39	324.76	374.18	413.01	379.48	222.39	425.37
M27	3.00	459.00	289.17	422.28	486.54	537.03	493.43	289.17	553.10
M30	3.50	561.00	353.43	516.12	594.66	656.37	603.08	353.43	676.01
M33	3.50	694.00	437.22	638.48	735.64	811.98	746.05	437.22	836.27
M36	4.00	817.00	514.71	751.64	866.02	955.89	878.28	514.71	984.49
M39	4.00	976.00	614.88	897.92	1034.56	1141.92	-	614.88	1176.08
M42	4.50	1121.00	706.23	1031.32	1188.26	1311.57	-	706.23	1350.81
M48	5.00	1473.00	927.99	1355.16	1561.38	1723.41	-	927.99	1774.97
M52	5.00	1758.00	1107.54	1617.36	1863.48	2056.86	-	1107.54	2118.39
M64	6.00	2676.00	1685.88	2461.92	2836.56	3130.92	-	1685.88	3224.58

* Extrapolated. ** Extrapolated for >M16. *** Extrapolated >M36